Geometry

Name _____

ALGEBRA REVIEW PACKET Per. _____ Date _____

These are some of the necessary skills that you will need from Algebra last year. This is your chance to review and make sure you have mastered them before we begin with Geometry! ☺

Rounding Numbers

Remember: Look at the number to the right of the place you are rounding to. If it is 5 or above – round up. If it is below 5 it stays the same.

whole number = no decimal place
tenth = *one decimal place*
thousandths = *three decimal places*
hundredth = *two decimals places*

Practice: Round the following numbers to the specified place values.

Round to the nearest whole number:

1.	21.684	**2.**	12.436	**3.**	8.962	**4.**	0.752	**5.**	1.123
	_____		_____		_____		_____		_____

Round to the nearest tenth:

6.	14.852	**7.**	5.52	**8.**	6.476	**9.**	0.423	**10.**	185.038
	_____		_____		_____		_____		_____

Round to the nearest hundredth:

11.	0.2587	**12.**	12.9852	**13.**	1.2629	**14.**	35.42385	**15.**	1.3695
	_____		_____		_____		_____		_____

Order of Operations

Remember:

P*arenthesis/groups/fraction bars*
E*xponents*
M*ultiplication**
D*ivision**
A*ddition**
S*ubtraction**

** Multiplication/Division and Addition/Subtraction are always done in order from left to right!*

Practice:

16. $4+7-12\div 3$

17. $12\bullet 3\div 6-9$

18. $(11+4)\div 3-2$

19. $3(6+7)$

20. $2+7\cdot 5$

21. $48\div(4+4)$

22. $8(2+7)-15$

23. $14\div 7-12\div 3$

24. $(6+25-7)\div 6$

25. $(6-4)\bullet 49\div 7$

26. $\dfrac{43-1}{4+2}+10$

27. $\dfrac{45}{8(5-4)-3}$

28. $8\dfrac{15}{5}-(5+9)$

29. $(10+2-2)\bullet 6-1$

30. $(2+6\times 2+2-4)\bullet 2$

Solving Equations

Ex:

1. $x+5=-1$
$-5\quad -5$
$x=-6$

2. $y-(-2)=-7$
$y+2=-7$
$-2\quad -2$
$y=-9$

3. $\dfrac{x}{5}=-2$
$5\bullet\dfrac{x}{5}=-2\bullet 5$
$x=-10$

4. $3y=-18$
$\dfrac{3y}{3}=\dfrac{-18}{3}$
$y=-6$

5. $\dfrac{x}{4}=-3$
$4\bullet\dfrac{x}{4}=-3\bullet 4$
$x=-12$

6. $4(-2x-11)=92$
$-8x-44=92$
$+44\quad +44$
$-8x=136$
$\dfrac{-8x}{-8}=\dfrac{136}{-8}$
$x=-17$

Practice: Solve for the variables.

31. $x - 2 = 10$

32. $\frac{x}{6} = -4$

33. $5x = -25$

34. $x - (-7) = -4$

35. $-3x - 2 = 7$

36. $\frac{x}{4} - 2 = 1$

37. $9x - 7 = -7$

38. $-6 + \frac{x}{4} = -5$

39. $2(n + 5) = -2$

40. $144 = -12(x + 5)$

41. $7(9 + x) = 84$

42. $\frac{x + 5}{-16} = -1$

43. $a + 5 = -5a + 5$

44. $p - 4 = -9 - p$

45. $5y - 14 = 8y + 4$

46. $y - 1 = 5y + 3y - 8$

47. $-18 - 6y = 6 + 18y$

48. $5n + 34 = -2(1 - 7n)$

49. $3(5x - 3x) + 5 = 47$

50. $26a - 22 = -4(1 - 6a)$

51. $3x + 2(x + 2) = 13 - (2x + 2)$

Solving Equations (with variables squared)

Remember: Get the variable squared alone and then square root both sides of the equation.

Ex:

$$x^2 - 2 = 7$$
$$+2 \quad +2$$
$$\sqrt{x^2} = \sqrt{9}$$
$$x = \pm 3$$

Practice:

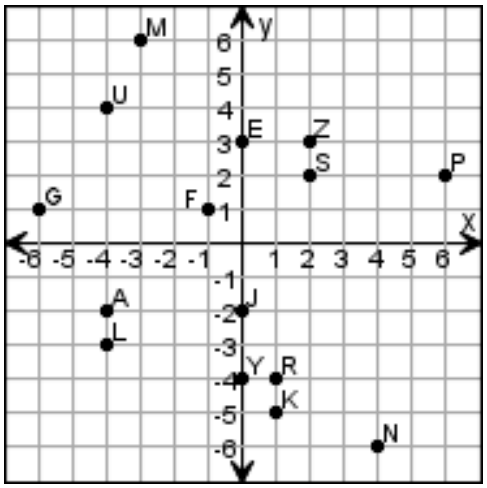
52. $y^2 = 16$ **53.** $z^2 = 81$ **54.** $x^2 + 3 = 28$

55. $x^2 - 5 = 95$ **56.** $2y^2 = 72$ **57.** $3x^2 = 27$

The Coordinate Plane

Remember: When plotting points, move in the x direction first and then the y direction. (x, y)

Practice: Give the coordinates for the identified point.

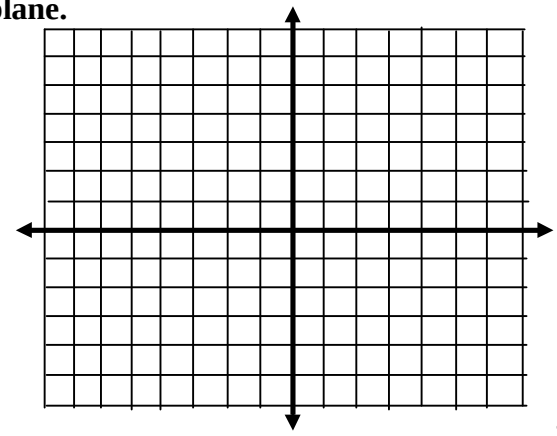


58. **E** _____ **59.** **P** _____

60. **L** _____ **61.** **M** _____

62. **Y** _____ **63.** **F** _____

Practice: Graph and label the following points on the coordinate plane.



64. **A (-1, 5)** **65.** **B (0, 4)**

66. **C (6, -3)** **67.** **D (-4, 0)**

68. **E (2, -2)** **69.** **F (1, -6)**

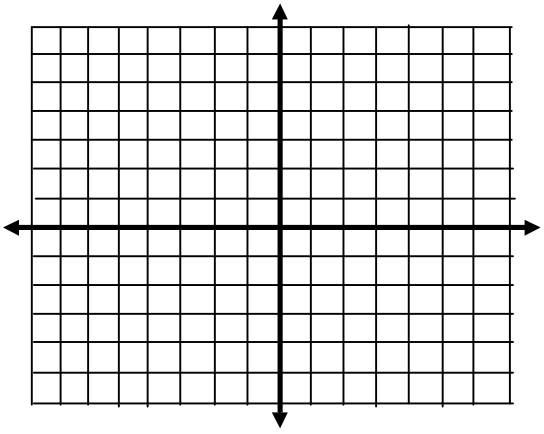
Graphing Lines

Remember:

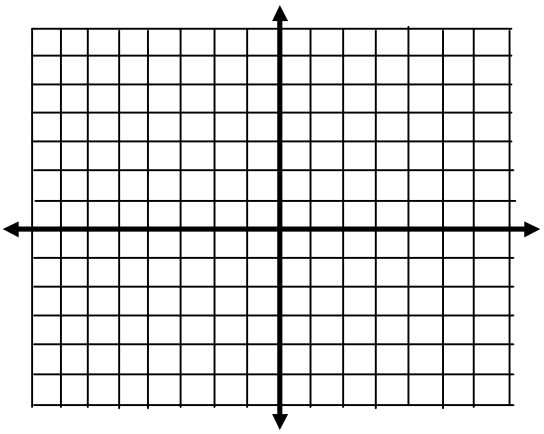
y = mx + b where m = slope and b = y-intercept

x = # (vertical lines) y = # (horizontal lines)

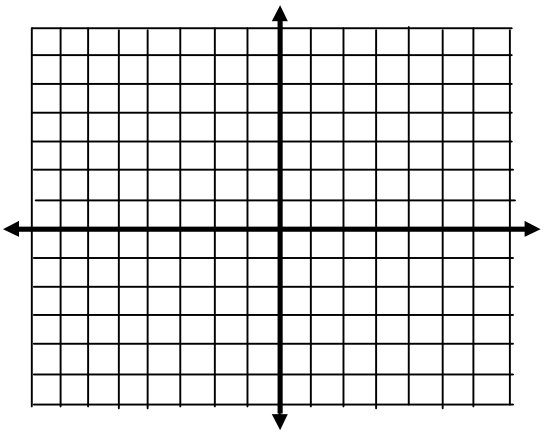
70. $y = -\frac{2}{3}x + 1$



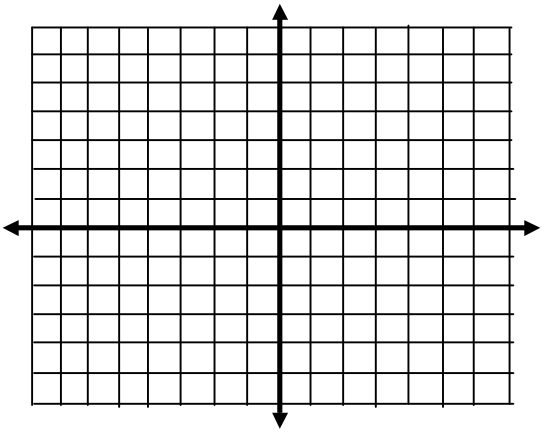
71. $y = \frac{1}{3}x - 4$



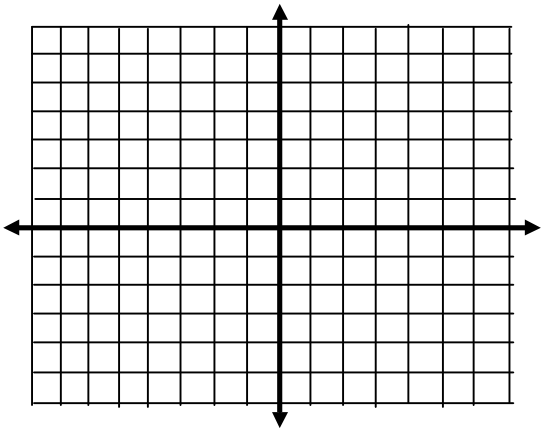
72. $y = 3x + 2$



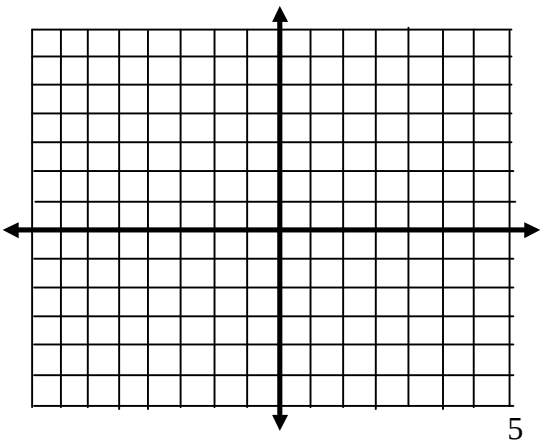
73. $y = -4x + 4$



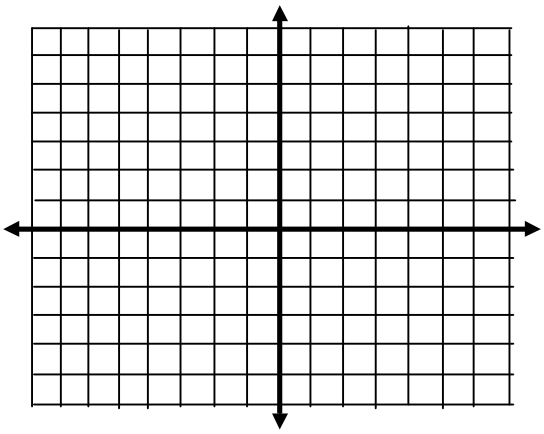
74. $y = \frac{2}{3}x - 6$



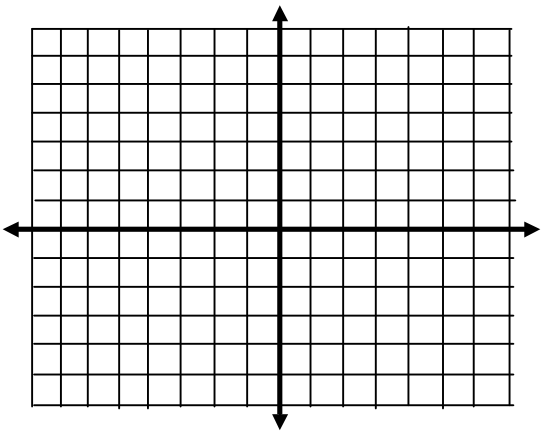
75. $y = -5x + 3$



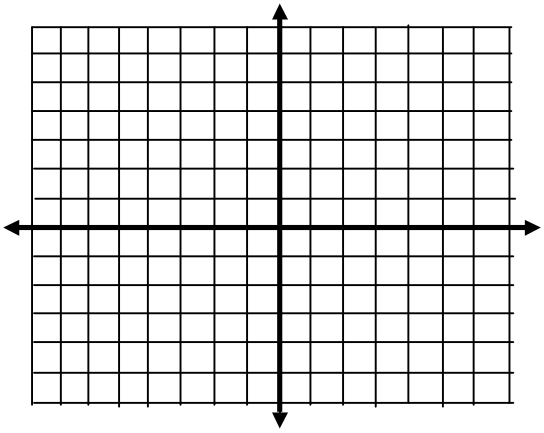
76. $y = -\frac{4}{5}x$



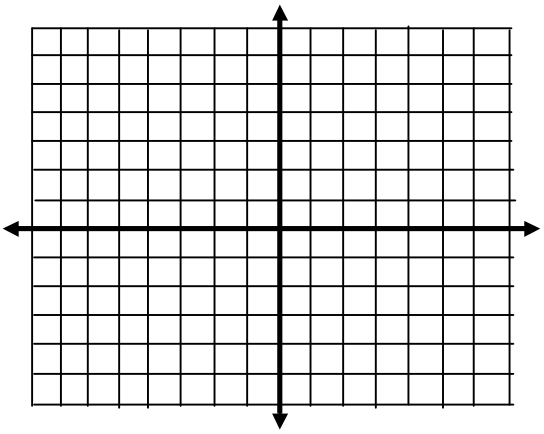
77. $y = -5x$



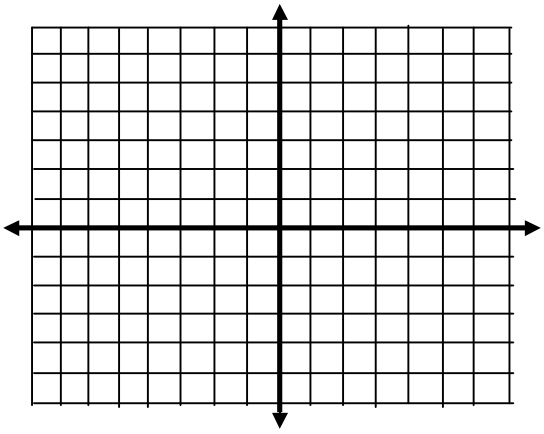
78. $x = -2$



79. $y = 3$



80. $x = 3$



81. $y = -1$